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COLORADO AGRICULTURAL COLLEGE

AGRICULTURE
AND THE
MECHANIC
ARTS

Agricultural College Bulletin

JANUARY 27 Daniel C. CROOKER No. 5

Issued at the Postoffice at Fort Collins
Colorado, on second-class matter



THE HOLLANDER BALKEN ENGRAVING CO.
DENVER

1903



FORT COLLINS
COLORADO



NEW BUILDING FOR CIVIL



ERING AND IRRIGATION

It were Happy if we studied Nature more in natural things; and acted according to Nature; whose rules are few, plain and most reasonable.

—Wm. Penn

(17th Century)

AN ILLUSTRATED COMPENDIUM

OF THE

Colorado State College

OF

Agriculture and the

Mechanic Arts

2 2 2
3 3 3
3 3 3

FORT COLLINS, COLORADO

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COLLEGE MOTTO:—Harmony and Progress.

C. A. C. COLORS:—Green and Orange: (“Alfalfa and Squash”).

C. A. C. YELL:—

Rick-a-chick-a-boom!

Rick-a-chick-a-boom!

Rick-a-chick-a

Rick-a-chick-a!

Boom! Boom! Boom!

Hoop-la-rah,

Hoop-la-ree!

Hoo rah! Hoo-rah!

C. A. C.

FOOTBALL YELL:—

Right in the neck, the neck, the neck;

Right in the neck, right in the neck!

Where?

Right in the neck, the neck, the neck;

Right in the neck, right in the neck!

There!

Three terms; beginning the first week in September, December and March.

Economy hath its wealth later.

In spite of the fact that Colorado's Agricultural College has had but \$27,000 special appropriation in twenty-five years, by close economy and far-seeing, it now holds in trust for the State the following properties:

Number of acres in College Farm.....	240	} Value, \$46,724
Number of acres in Reservoir Farm.....	360	
Number of College Buildings.....	12	} Value, 176,849
Number of College Barns.....	4	
Number of books in College Library.....	16,000	—Value, 9,750
Equipment and Apparatus, all Departments.....		Value, 79,568
Fine Stock		Value, 12,000

GROWTH OF SCHOOL

YEAR	MALES	FEMALES	TOTAL
1897	223	112	335
1898	245	99	344
1899	251	94	345
1900	244	119	363
1901	273	114	387

(Preparatory Year dropped, enrollment 30.)

1902	319	129	448
1903	Estimated		490

ALUMNI OF THE COLLEGE

Regular Courses.....	189
Commercial Course	50



PRESENT IRRIGATION BUILDING

COURSES OF STUDY

- I. Agriculture.
 - (a) Agronomy. (b) Animal Industry. (c) Horticulture. (d) Entomology. (e) Chemistry.
- II. Civil and Irrigation Engineering.
- III. Mechanical Engineering.
- IV. Electrical Engineering.
- V. Architecture.
- VI. Veterinary Science.
- VII. Domestic Science.
- VIII. Commercial (2 years).

A preparatory course of two years carries the student, having a first-class Eighth Grade Certificate, to the Freshman Year of any course and to the Junior Year of the Commercial Course. Those who have satisfactorily completed the work of the Tenth Grade will be admitted to the Second Preparatory Year.

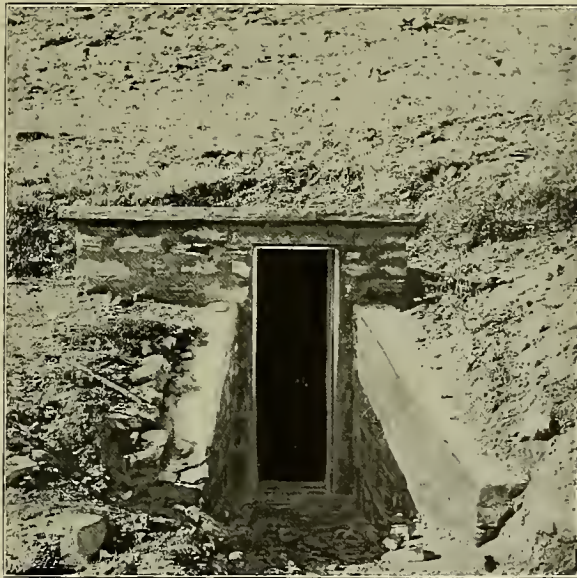


MIDDLE GATE



FOUR GOOD ONES

Students may be admitted to the Freshman Year of any course, or to more advanced standing, by examination.



THE SPRING HOUSE



PHOTO BY E. SAGLEY

STATE BOARD OF AGRICULTURE

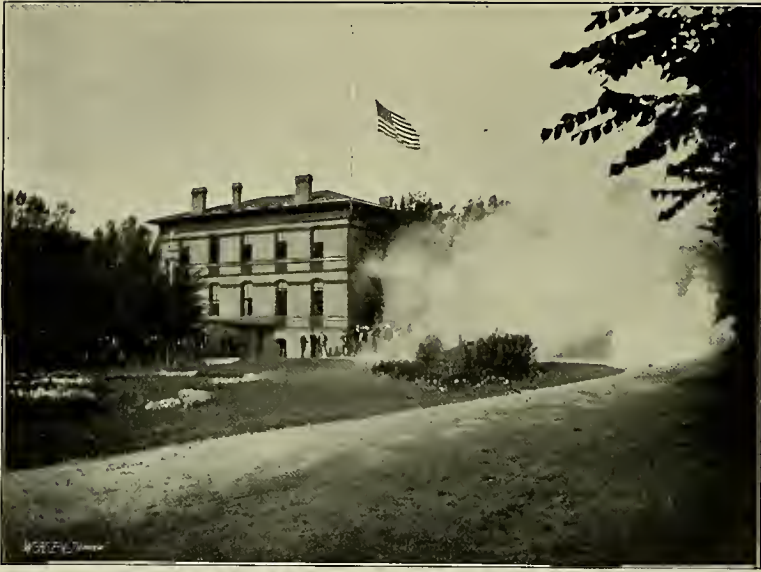
	<i>Post Office</i>	<i>Term Expires</i>
HON. B. F. ROCKAFELLOW.....	Canon City	1903
HON. J. A. NEWCOMB.....	Golden	1903
HON. JESSE HARRIS.....	Fort Collins	1905
HON. P. F. SHARP.....	Denver	1905
HON. HARLAN THOMAS.....	Denver	1907
MRS. ELIZA F. ROUTT.....	Denver	1907
HON. JAMES L. CHATFIELD.....	Gypsum	1909
HON. B. U. DYE.....	Rocky Ford	1909
GOVERNOR JAMES H. PEABODY.....	} <i>Ex-Officio.</i>	
PRESIDENT B. O. AXLESWORTH.....		

OFFICERS

P. F. SHARP.....	President
A. M. HAWLEY	Secretary
WHITNEY NEWTON.....	Treasurer
(State Treasurer, Denver, Colo.)	
CHARLES H. SHELDON.....	Local Treasurer



BUD AND FLOWER



ON THE FIRING LINE

BOARD OF INSTRUCTION

BARTON O. AYLESWORTH, A.M., LL.D.,
President and Professor of Political Economy and Logic.

JAMES W. LAWRENCE, B.S.,
Professor of Mechanical Engineering.

LOUIS G. CARPENTER, M.S.,
Professor of Civil and Irrigation Engineering.

CLARENCE P. GILLETTE, M. S.,
Professor of Zoology and Entomology.

WILLIAM P. HEADDEN, A.M., PH.D.,
Professor of Chemistry and Geology.

THEODOSIA G. AMMONS,
Dean of Woman's Work and Professor of Domestic Science.

EDWARD B. HOUSE, B.S., E.E.,
Professor of Mathematics.

EDWARD M. TRABER, A.B.,
Professor of Rhetoric and Philosophy.

ALFRED M. HAWLEY,
Secretary of the Faculty.

WILLIAM RUSSELL THOMAS, A.B., Litt.D.,
Professor of Constitutional History and Irrigation Law.

RICHARD A. MAXFIELD, B.S., Major Cadet Battalion,
Professor Military Science and Tactics.

BOARD OF INSTRUCTION—Continued

*-----

Professor of Agriculture.

VIRGINIA H. CORBETT, B.S.,
Professor of History and Literature.

WENDELL PADDOCK, M.S.,
Professor of Botany and Horticulture.

GEORGE H. GLOVER, B.S., D.V.M.,
Professor of Veterinary Science.

JOSEPH F. DANIELS,
Librarian.

FRANK H. ORMSBY,
Director of Music.

INSTRUCTORS AND ASSISTANTS

ROBERT E. TRIMBLE, B.S.,
Meteorology and Irrigation Engineering.

SAMUEL BOOTHROYD, B.S.,
Physics and Civil Engineering.

J. S. TITCOMB, B.S.,
Field Work in Engineering.

L. D. CRAIN, B.M.E.,
Mechanical Engineering.

E. D. SEARING, B.S.,
Mechanical Engineering.

EDWARD P. BOYD, B.S.,
Architecture.

WILLIAM F. GARBE,
Foundry Practice.

F. H. HADLEY,
Forge-Room Work.

FRED C. ALFORD, B.S.,
Chemistry.

EARL DOUGLASS, B.S.,
Chemistry.

LATHROP M. TAYLOR, B.S.,
Stenography and Typewriting.

CHARLES G. DWYRE, B.ACCT.,
Bookkeeping.

S. L. MACDONALD,
Mathematics.

SARAH T. SUTHERLAND,
Domestic Science.

* To be filled.

INSTRUCTORS AND ASSISTANTS—Continued

MABEL MEAD, A.B.,
German, French and Spanish.

L. A. JOHNSON, M.S.,
Entomology.

FRED M. ROLFS, B.S.,
Botany and Horticulture.

HENRY H. ORTH,
Horticulture and Landscape Gardening.

CLARENCE J. GRIFFITH, B.S.A.,
Animal Industry.

ANDREW H. DANIELSON, B.S.,
Agronomy.

WILLIAM O'BRIAN,
Farm Superintendent.

RALPH H. HESS, B.S.,
Secretary to the President.

B. D. G. BISHOP, B.S.,
Second Assistant in Chemistry.

ARTHUR MILLIGAN,
Stenographer, Director's Office.

MARGARET MURRAY,
Stenographer.

KATHARINE MURRAY,
Stenographer.

FELLOWS

First Year.

ORO McDERMITH, '02.
HARRY TRUE, '02.
ERNEST F. GRAVES, '02.
FRED BISHOP, '02.

Second Year.

ROYAL S. HOWLETT, '01.

FIELD AGENTS

H. H. GRIFFIN, B.S.,
Rocky Ford Station.

J. E. PAYNE, M.S.,
Plains Station.



COLLEGE BAND

LOCATION AND HISTORY

LOCATION—The State Agricultural College is located at Fort Collins, Colorado, the county seat of Larimer County, which is one of the most prosperous agricultural counties in the State. The town contains 5,000 inhabitants, and is beautifully situated about five miles from the foothills, and in full view of Long's Peak and many miles of the Snowy Range.

It is free from saloons and other temptations to an idle and vicious life. It is loyal to the College and its homes are open to the student stranger within its gates.

HISTORY—The origin of The State Agricultural College of Colorado, like that of its sister institutions in other States, dates back to an act of Congress, passed July 2, 1862. Therein it is proposed to endow in the several States and Territories, by grants of public lands, "a college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

This act gave the College an endowment of 90,000 acres of land.



FROM SCOTLAND

LOCATION AND HISTORY—*Continued*

In 1872 several enterprising and generous gentlemen gave to the State two hundred and forty acres of arable land, which comprises the present college plant.

When the State Constitution was adopted, the College, under a provision thereof, became an institution of the State of Colorado. Its location at Fort Collins was confirmed and its management passed into the control of the State, "under such laws and regulations as the General Assembly shall provide."

The first class was graduated in 1884. The total number of graduates is as follows: Regular, 189; commercial, 50; total, 239.

The work of the College is carried on in strict conformity with a section of the General Laws of the State, which reads as follows:

"The design of the institution is to afford thorough instruction in agriculture and the natural sciences connected therewith. To effect that object most completely, the institution shall combine physical with intellectual education, and shall be a high seminary of learning, in which the graduates of the common school, of both sexes, can commence, pursue, and finish a course, terminating in thorough theoretical and practical instruction in those sciences and arts which bear directly upon agriculture and kindred industrial pursuits."



HORTICULTURAL HALL





AGRICULTURAL HALL

LITERARY SOCIETIES

The literary societies of the C. A. C. are virile. They teach self-control, deeper thinking, extempore address, debate, criticism, book reviewing and social intercourse.

It may be somewhat old-fashioned, but the opinion that the literary societies of a college are a fairly accurate thermometer marking its intellectual temperature is not all wrong.

Through them the student learns to concrete and give expression to the philosophy, history and demonstration which have come to him in the classroom.

Moreover, it fits him for his place later among men in the Grange, institute, lyceum, social circle, and on the political platform.

Y. M. C. A. AND Y. W. C. A.

These have high standing from the fact that without being sectarian they afford the student an opportunity to develop the religious side of his nature in a practical and sensible way.

These associations receive the new students, locate them in comfortable homes, and assist them in registration.

Also, by receptions and sociables, they greatly help to make the zest and the *esprit de corps* of college life.

In a quiet way, they seek, also, to deepen the student's natural reverence for spiritual truth.

Religion is coming more and more to mean "a right way to do things."



COLLEGE SPRING



EVENING

ATHLETIC ASSOCIATION

It is important that young people who have led a more or less busy life should not be permitted to enter upon a four-years' college course which shall demand of them close application within doors without having provided for them such physical recreation as will counteract the heavy draft upon their nervous energy.

Regular and systematic physical exercise is necessary to insure a successful college career.

Proper heart action, the natural assimilation of food, and a gradual chest expansion are among the results of well-conducted college athletics.

It is the purpose of the Faculty to restrain athletics within sensible bounds by encouraging rational contests. Sympathetic government is needed here more than in any other phase of college life.

The Association is composed of students and members of the Faculty. The Board of Directors must contain at least two members of the Faculty.

A new gymnasium will be ready September, 1903.

C. A. C. ORATORICAL ASSOCIATION

Noblest among the arts is oratory. It is coming to a splendid revival in the discussions of the great problems now confronting the nation.

Nothing in college life arouses more interest than a contest between those who possess the gift of oratory. *Nowhere* may it reach a higher development than among those whose ancestors have been hardy, and whose early life has not been a stranger to the fields and woods and robust health.

It is expected that during the coming year a gentleman of recognized ability will have charge of those desiring to study oratory, and will give special training to those who enter the contests.

The Association was organized in 1892. Its object is to encourage the practice and study of oratory in the College. Students registered in any of the four higher classes may be admitted to membership by vote of the Association.

The Association holds two contests each year—one for the members of the Sophomore and Freshman classes; the other for the members of the Senior and Junior classes.



DOMESTIC SCIENCE HALL



FOOT BALL TEAM

AGRICULTURAL CLUB

This is an organization of young men who believe that farming is both a science and an art.

That it is the noblest among all the vocations of man.

They are banded together for the promotion of the Agricultural Department of the College, first of all; then, for mutual improvement in every way that befits the calling to which they are devoted.

The home life, the literary life, and the social life of the farm engage their attention. They also specialize upon such phases of agriculture and kindred sciences as require original investigation and research by means of treatises and bulletins.

Meetings are held every two weeks for the discussion of agricultural subjects and scientific problems of the day. Papers presented by members of the Club are followed by a general discussion.



TEST FOR TUBERCULOSIS

FARMERS' INSTITUTES

The Agricultural College is not merely for the education of young men and women in the practical sciences, but it is designed to bring the latest and best information relative to agriculture to those who need and desire it, in the most direct way possible.

To this end Farmers' Institutes have been found the most available means.

During the winter months members of the Faculty will meet the agriculturists of the various sections of the State in convention and confer with them as to the best methods for the development of Colorado along these important lines. Thus, the results of experimentation in every kind of soil product are brought immediately to those most interested in them. Also, the various foes of fruits and growing crops and the means for their removal are set forth in short, helpful talks, popularizing the most scientific research, and, in general, reducing scientific investigations to terms of utility.



FORGE ROOM

FARMERS' INSTITUTES—Continued

Institutes were held during the last season at Grand Junction, Glenwood Springs, La Junta, Rocky Ford, Las Animas, Lamar, Longmont, Loveland, Cherrelyn and other points.

The Secretary of the Board, Hon. A. M. Hawley, solicits early correspondence with reference to subjects and speakers for the coming year, as well as to the organization of new institutes.

The College also holds itself in readiness at all times for co-operation with the Granges of the State. In fact, it is the servant of the people, and has no other reason for existence than to serve the interests of the State and general government.



NORTH GATE

BULLETINS

Many valuable bulletins have been issued by the Experiment Station upon subjects of vital interest to the agriculturists of the State and the United States. These are for free distribution. By addressing L. G. Carpenter, Director of the Experiment Station, such bulletins as are not out of print may be obtained at once. If so desired, the name of the correspondent will be put on the permanent mailing list. The following bulletins may be had on application:

NO.	TITLE	AUTHOR
33.	Seepage, or Return Waters from Irrigation.....	L. G. Carpenter
35.	Alfalfa	William P. Headden
36.	Sugar Beets	W. W. Cooke, William P. Headden
38.	Sheep Scab; A Few Insect Enemies of the Orchard.....	C. P. Gillette
39.	A Study of Alfalfa and Some Other Hays.....	William P. Headden



HARVEST SCENE ON COLLEGE FARM

BULLETINS—Continued

NO.	TITLE	AUTHOR
40.	Barley	W. W. Cooke
63.	Sugar Beets in Colorado in 1897.....	W. W. Cooke, William P. Headden
43.	(Technical) Colorado Lepidoptera, etc.....	C. P. Gillette
65.	Soil Study. Part III. The Soil.....	W. P. Headden
66.	Relation of Bovine to Human Tuberculosis. Tuberculin Tests of College Herd	G. H. Glover
67.	Distribution of Water. Powers and Duties of Colorado Officials	H. N. Haynes
68.	Pasture Grasses. Leguminous Crops. Cantaloupe Blight...	H. H. Griffin
69.	Plant Diseases of 1901	Wendell Paddock
70.	Potato Failures. A Preliminary Report.....	F. M. Rolfs
71.	Insects and Insecticides	C. P. Gillette
73.	Feeding Value of Beet Pulp	B. C. Buffum and C. J. Griffith
74.	Swine Feeding	B. C. Buffum and C. J. Griffith
75.	Lamb Feeding Experiments	B. C. Buffum and C. J. Griffith
76.	Feeding Beet Pulp to Lambs.....	H. H. Griffin



GREENHOUSES

PRESS BULLETINS

NO.	TITLE	AUTHOR
4.	The Beet Army Worm	C. P. Gillette
6.	A So-Called Blight Cure	C. H. Potter
7.	The Seepage Measurements of the Experiment Station..	L. G. Carpenter
8.	Potato Failures (1900)	W. Paddock and F. M. Rolfs
9.	Sunshine for 1900	L. G. Carpenter
10.	Sugar Beets. Summary from Bulletin 63.....	W. P. Headden
11.	How to Fight the Codling Moth	C. P. Gillette
12.	Potato Failures (1901).....	W. Paddock
13.	Best Time to Cut Alfalfa	William P. Headden
14.	Seepage Water, Boulder and South Boulder Creeks....	L. G. Carpenter
15.	Seepage Waters, Uncompahgre River.....	L. G. Carpenter

DISCIPLINE

Nowhere in the West may be found better order and more contentment than among the students of C. A. C.

There is a mutualism between Faculty and students that not only insures freedom without familiarity, but the highest quality of classroom work.

There is no long list of rules to be evaded. Good behavior comes from within, not from without. "Justice" is the general rule.

The government is inspirational.

The consequent discipline quiet, but effectual.

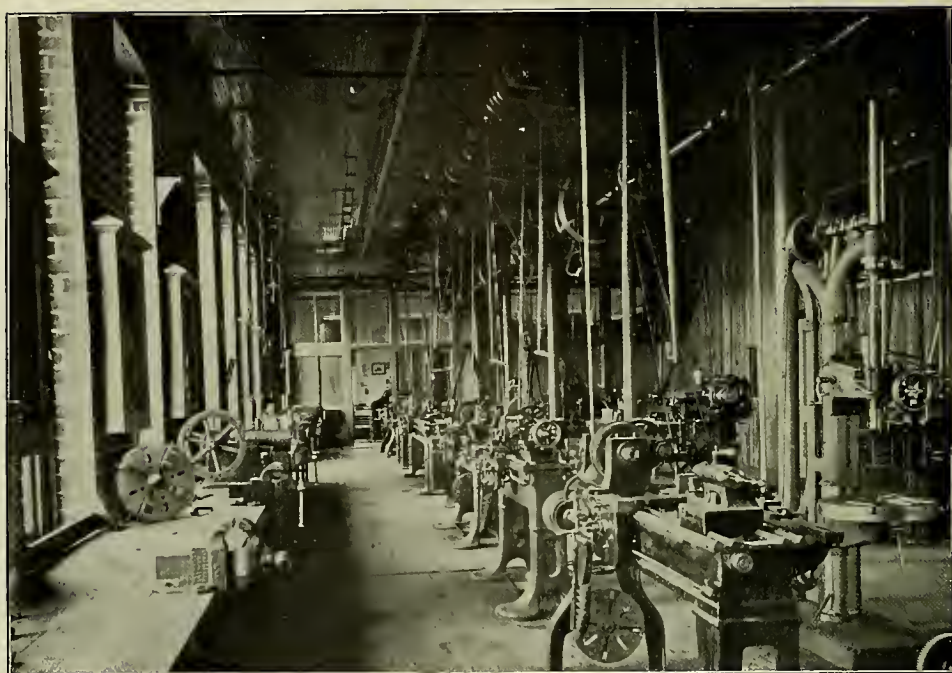
Conscience makes stronger restraint than law.

The fact that Fort Collins is free from saloons and their accompanying vices reduces temptation to a minimum. An additional safeguard is the "open home" policy of the good people of Fort Collins.

In the matter of freely granting social intercourse to the students who come from abroad the city has always had at heart the welfare of the young men and young women who, for a time, are committed to the oversight of THE STATE AGRICULTURAL COLLEGE.



STUDENT SURVEYING PARTY



MACHINE ROOM

AGRICULTURE

The course of instruction is designed to educate students for agricultural pursuits and scientific investigations. Some of the subjects taught are farm buildings and roads, stock breeding, dairying, nature of soils, practical irrigation, care of live stock, and the fertilization and cultivation of crops. The whole course is illustrated by the experimental work always in progress, and is supplemented by daily practical work on the farm and in the laboratory.

The College Farm is not only experimental but model. The best scientific and practical farming is exploited. The students themselves aid in the work, superintended by the most skillful agriculturists.

BOTANY AND HORTICULTURE

Botany—structural and systematic—is taught from text-books and by lectures. A great variety of plants is at hand. In physiological botany the students use compound microscopes and have laboratory practice two hours daily. An herbarium of native and foreign plants and the greenhouses furnish material for study. Instruction in horticulture is given, principally, by means of lectures. Some of the subjects considered are vegetable gardening, methods of plant propagation, forestry, pomology, floriculture and landscape gardening.



WAITING

CIVIL AND IRRIGATION ENGINEERING

The subjects taught are irrigation engineering, the materials of engineering, surveying, construction of dams and reservoirs, agricultural hydraulics, trusses and bridges, meteorology, and physics.

The department has fine physical and hydraulic laboratories, a draughting room, a good supply of standard engineering instruments, testing machines, and a complete set of meteorological instruments.



COLLEGE RESERVOIR

MECHANICAL ENGINEERING

The studies and practice of this department prepare students for the profession of the mechanical engineer. The instruction, theoretical and practical, covers a wide field. The special studies of this course are as follows: Drawing; carpentry and joinery, also wood-working machinery; pattern making and foundry work; forge work; machine and vise work in metals; principles of mechanism; strength of materials; boilers; the steam engine; and machine design, machinery and mill work.



A CAMPUS CURVE

MATHEMATICS

The course is comprehensive and thorough, especially for the engineering students. The following subjects receive careful attention: Algebra, geometry, trigonometry, descriptive geometry, analytic geometry, and calculus. Other branches of mathematical science are taught in the department in which their knowledge has a special application.



CATTLE YARD



A SCRIMMAGE

CHEMISTRY AND GEOLOGY

Students acquire a thorough mastery of the elementary principles of chemical science. They have two hours practice daily in the laboratory.

Keeping in mind the object for which the College is founded, we have so planned our chemical course as to prepare the student for the general application of chemistry to the industrial arts, while seeking thoroughly to ground him in the application of science to agriculture. A chemical laboratory fitted up with modern appliances, balance-room, foul gas room, and desks for thirty-six students, is ready for the classes.

Geology receives the attention which its importance as one of the foundations of agricultural science demands.

ZOOLOGY AND ENTOMOLOGY

Two terms are given to physiology. The laboratory is well equipped, possessing, among other things, a fine series of mounted skeletons; an expensive manikin; large models of the eye, brain and ear; and compound and dissecting microscopes; microtomes, and dissecting instruments. Students in zoology are furnished with all necessary equipment for laboratory work. Particular attention is given to the economic features of entomology. Students prepare the principal insecticide substances and apply them for the destruction of insects.



SURVEYING PARTY



COLLEGE LANE



BASKET BALL TEAM

HISTORY AND LITERATURE

A well-rounded education includes a somewhat thorough knowledge of history and English literature. These subjects are studied throughout the entire course. The development of a literary taste is the aim of this work. The study of the philosophy of history includes such subjects as historical investigation; laws governing human actions; reciprocal influences of religion, literature and government; comparisons and criticisms of past civilizations; and the elements found in our present civilization.

The College Library is an important factor. Its shelves are well filled with standard literature, and with works of special interest and assistance to the student of history.



STUDENTS SURVEYING IN MOUNTAINS

RHETORIC

The ability to write a clear and an elegant English sentence is an accomplishment much to be desired; and it is a recognized fact that English forms an important branch in all well-rounded courses of study.

Composition writing and the preparation of orations form an important feature of the work in English.



STUDENTS SURVEYING LONG'S PEAK



CLASS IN COOKING

PHILOSOPHY

The courses in Psychology, Logic and Ethics bring to the student the latest findings in these great subjects.

There is not only a thorough technical study required, but above everything else the teaching is of such quality as produces good citizenship. It is as important to know the mind itself as to know discovered truths in order to arrive at noble living.

Not only mental processes but ethical are set forth.

The way to arrive at a given human condition is as important as to know the condition itself.



HALF MAST FOR PRESIDENT MCKINLEY

DOMESTIC SCIENCE

Special provision has been made for young ladies, not only by the "Ladies' Course," which includes the best modern methods of cooking, sewing and general house care, but by the loyal support given to co-education by the Board and Faculty.

The four years' course has for its object the typical, educated, Colorado woman, ready for the world's work, side by side with her brother, and, later, to become a veritable "helpmeet" to her husband. She will solve with him the problems of civilization.



MAIN BUILDING

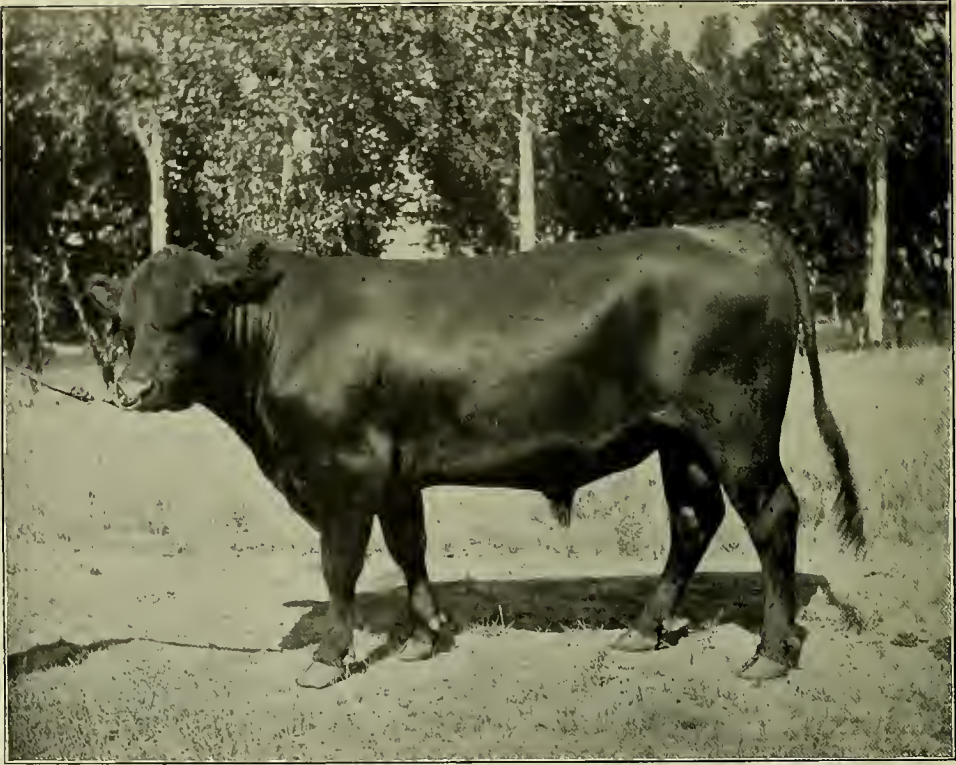
SOCIOLOGY

While sociology is a new science and as yet somewhat speculative, it offers a body of fact and philosophy sufficient to shape the opinions and the life of college students. The aim in this is to discover those human relationships which make for happiness; also, to develop in the student his highest human value as a member of society, in the belief that stronger units make stronger compounds.

Much reading is required in this work, chiefly of current literature. The progress of modern thought is closely watched.



JUNIOR TROPHY CUP



BEST IN COLORADO .

VETERINARY SCIENCE

A long cherished plan of the State Board of Agriculture has been realized at last in the establishment of a full course of Veterinary Science and Surgery. The work will begin in the Sophomore year of the regular course. Thorough and systematic instruction will be given in anatomy, bacteriology, materia medica, principles and practice, and therapeutics. Afternoon work will be devoted to clinics in the laboratory.

The aim of the course is to prevent animal disease, losses from which are increasing annually. The relation of animal disease to the human body will be not only a matter of research, but will result in the publication of invaluable bulletins.



LAVATORY



COLLEGE STATION

ARCHITECTURE

The State Agricultural College has the honor to have initiated this department in Western schools. A four years' course is offered, covering both the art and practical side of designing and construction.

Any one who may have completed this course will not go into his profession as a bungler. Not only will buildings be safer, but more beautiful. In addition to the regular course of studies lectures will be given by eminent architects of Denver and elsewhere.



NEW HORSE BARN

ELECTRICAL ENGINEERING

The Board has not been able to longer resist the demands made upon it by patrons and students for a course in Electrical Science. It is not only included in the list of subjects permissible under the Morrill Act, but is so related to all industrial life that all skilled workmen should know something of it. An electrical building is in progress of erection. By September 1, 1903, this department will be ready for service.



CHEMICAL BUILDING

COMMERCIAL COURSE

This course covers a period of two years. Its work is not designed to be a short cut to the business world, but to afford a thorough and practical training for some form of commercial life and, with this special training, to give some general culture. Some of the subjects taught are spelling, penmanship, commercial arithmetic, commercial correspondence, typewriting, stenography, bookkeeping, commercial law, international law, business practice and banking, elementary algebra, plane geometry, civil government, political economy, United States history, general history, grammar, literature, and composition and rhetoric.



MAIN BUILDING

MILITARY DEPARTMENT

That military training and military instruction are essential elements in an education is a recognized fact. At the beginning of the Civil War the schools and colleges were few where this branch received any attention. In consequence, men who were capable drill masters and fitted for subordinate office in the army were very few.

It was in the following year, 1862, that Congress made provision to correct this state of affairs. The "College Land Grant Act" was passed. This was the beginning of what are now known as Agricultural and Mechanical





HOG BARN

MILITARY DEPARTMENT—Continued

Colleges. In colleges established under this act military instruction is made of fundamental importance. It is compulsory on all male students of the Agricultural College of Colorado.

As a result of this work large numbers of young men are subjected to military discipline at the time in their lives when it has the best effect. Men who complete the four years' course should be able, if occasion demand, to raise and fit for service an infantry company or battalion. Excellent results have already been made manifest in the quick conversion of citizens into disciplined soldiers, as was the case in the late war. It was, doubtless, the infusion of trained men from college battalions that made this remarkable change possible.

Even the young man who has no ambition to be a soldier or to know a soldier's duties is given the physical exercise which produces the elastic step, aids development, and gives easy control of the body. Furthermore, the cadenced step of marching troops, the display of the national flag, the blare of trumpet and the beat of drum will stir in the dullest heart emotions of highest patriotism.



FLAG RAISING

THE POLITICAL SCIENCES

Especial attention is given to the study of the political sciences—the Constitution of the United States and its history, political economy, irrigation law, international law. These topics are preceded by a thorough course in history. Text-books are supplemented by lectures which bring the applications of recognized principles in economics and in jurisprudence down to the events of the present time, so as to better illustrate the same, and impress the duties of good citizenship upon the mind of the student. The work of no



COLORADO HOME-MAKERS

State educational institution, no matter what its special function may be, can be considered as satisfactory unless its graduates shall be thoroughly instructed in the principles of free republican government, the necessity of maintaining the absolute purity of the elective franchise, and the rights and duties of citizenship. Popular government rests on the intelligence and integrity of the people, and this idea is kept prominently in view by the State Agricultural College.



CAMP AYLSWORTH



FOUNDRY

Over one hundred towns and cities of Colorado are represented in the student body.

Student labor is placed on a rational basis. Those work who need help. The work is well done.

There are no matriculation fees nor tuition charges.

The college is absolutely free to all who enter.



STUDENTS MEASURING LONG'S PEAK



SOFT BUT FIRM

The ladies are drilled by a competent woman in Physical Culture. To many this is as valuable as mental training. Health, grace and strength follow. Brain work is keener, emotions subjected to the will.



IRRIGATING THE CAMPUS

THE PROPOSED IRRIGATION BUILDING

In no State is irrigation so important as in Colorado. Seventy-five per cent. of the State's values depend upon it. In no irrigation State is the educational equipment for teaching irrigation so inadequate. Professor L. G. Carpenter is, without question, the greatest instructor in the science of irrigation in America. With such a teacher, with hundreds of students, with so great needs as are now upon the State, it would be disgraceful to longer handicap the work.

The double cut at the front of this book shows the proposed building for Civil and Irrigation Engineering. The building will cost about \$60,000. It will cost not less than \$20,000 more to equip it.

Mr. Carpenter's work for Colorado has been, and is, worth all the entire institution has cost the State, hampered though he has been by lack of equipment.



STUDENT SURVEYING PARTY ON LONG'S PEAK



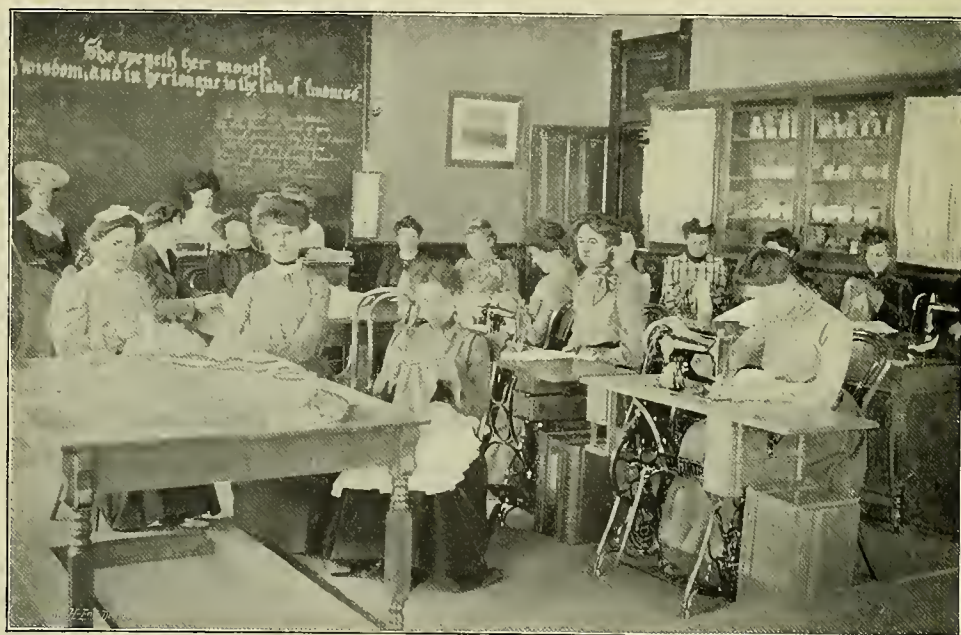
MECHANICAL BUILDING



CLASS IN TYPEWRITING



ARTILLERY SQUAD



CLASS IN SEWING





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